Lesson Summary

- A conditional relative frequency compares a frequency count to the marginal total that represents the *condition* of interest.
- The differences in conditional relative frequencies are used to assess whether or not there is an association between two categorical variables.
- The greater the differences in the conditional relative frequencies, the stronger the evidence that an association exits.
- An observed association between two variables does not necessarily mean that there is a cause-and-effect relationship between the two variables.

Consider again the summary of data from the 100 randomly selected students in the Rufus King High School investigation of after-school activities and gender.

	Intramural Basketball	Chess Club	Jazz Band	Not Involved	Total
Females	20	10	10	20	60
Males	20	2	8	10	40
Total	40	12	18	30	100

1. Construct a row conditional relative frequency table for this data. Decimal values are given to the nearest thousandth.

	Intramural Basketball	Chess Club	Jazz Band	Not Involved	Total
Females					60
Males					40
Total					

2. For what after-school activities do you think the row conditional relative frequencies for females and males are very different? What might explain why males or females select different activities?

3. If John, a male student at Rufus King High School, completed the after-school survey, what would you predict was his response? Explain your answer.

4. If Beth, a female student at Rufus King High School, completed the after-school survey, what would you predict was her response? Explain your answer.

5. Notice that 20 female students participate in intramural basketball and that 20 male students participate in intramural basketball. Is it accurate to say that females and males are equally involved in intramural basketball? Explain your answer.